

REPORT OF THE COMMITTEE ON PUBLIC INFRASTRUCTURE, TECHNOLOGY AND SUSTAINABILITY

Voting Members:

Carol Fukunaga, Chair; Joey Manahan, Vice-Chair;
Ron Menor, Kymberly Marcos Pine, Heidi Tsuneyoshi

Committee Meeting Held
March 25, 2019

Honorable Ann H. Kobayashi
Chair, City Council
City and County of Honolulu

Madam Chair:

Your Committee on Public Infrastructure, Technology and Sustainability, which considered Resolution 18-283 entitled:

**"RESOLUTION REQUESTING THE CITY ADMINISTRATION TO CONSIDER
USING CARBON DIOXIDE MINERALIZATION CONCRETE FOR ALL FUTURE
CITY INFRASTRUCTURE PROJECTS UTILIZING CONCRETE,"**

introduced on December 3, 2018, reports as follows:

The purpose of the Resolution is to request the City Administration to consider post-industrial carbon dioxide mineralized concrete for use in all City and County of Honolulu capital improvement projects utilizing concrete where the utilization of carbon dioxide mineralized concrete does not significantly increase the costs of or significantly delay the project.

The Director of the Department of Design and Construction testified in support of the Resolution and stated that the Department plans to include the use of this new technology in its future specifications.

A representative from the Elemental Excelsior testified in strong support of the Resolution, detailing how this Resolution aligns with the City's June, 2017, commitment to the Paris Climate Accord, as well as State policies that set a target for a zero-emissions clean economy by 2045. The representative's written testimony also

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cited several benefits of this "competitive and innovative" technology which "can be implemented quickly and is economically responsible" and "reduces greenhouse gas emissions" not only from cement production but from importation of cement.

In written testimony in support of the Resolution, Hawai'i Gas outlined how this process helps reduce our carbon footprint:

Post-industrial carbon dioxide mineralized concrete is a technology that injects recycled CO² into fresh concrete. In a process known as CO² mineralization, the CO² is converted into a mineral and becomes permanently captured. This stops the release of additional greenhouse gases.

Hawai'i Gas went on to explain that this technology "can reduce up to 700 megatons of annual global CO² emissions" and that this "emerging industry of beneficial-reuse-of-CO² sector is expected to become a \$1 trillion industry by the year 2030."

A representative from CarbonCure Technologies testified in strong support of the Resolution, explaining its mission to reduce the carbon footprint from the built environment by using CO² to improve the manufacturing process of concrete, the world's most abundant man-made material. Noting that the company recently completed installation of this technology at an Island Ready Mix concrete plant, the representative identified other Hawaii initiatives, including the State Department of Transportation's proposed use of mineralized concrete on the Kapolei Interchange and the University of Hawaii's research project for new uses.

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Your Committee on Public Infrastructure, Technology and Sustainability is in accord with the intent and purpose of Resolution 18-283 and recommends its adoption. (Ayes: Fukunaga, Kobayashi [temporary voting member], Tsuneyoshi – 3; Noes: None; Excused: Manahan, Menor, Pine – 3.)

Respectfully submitted,


Committee Chair

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